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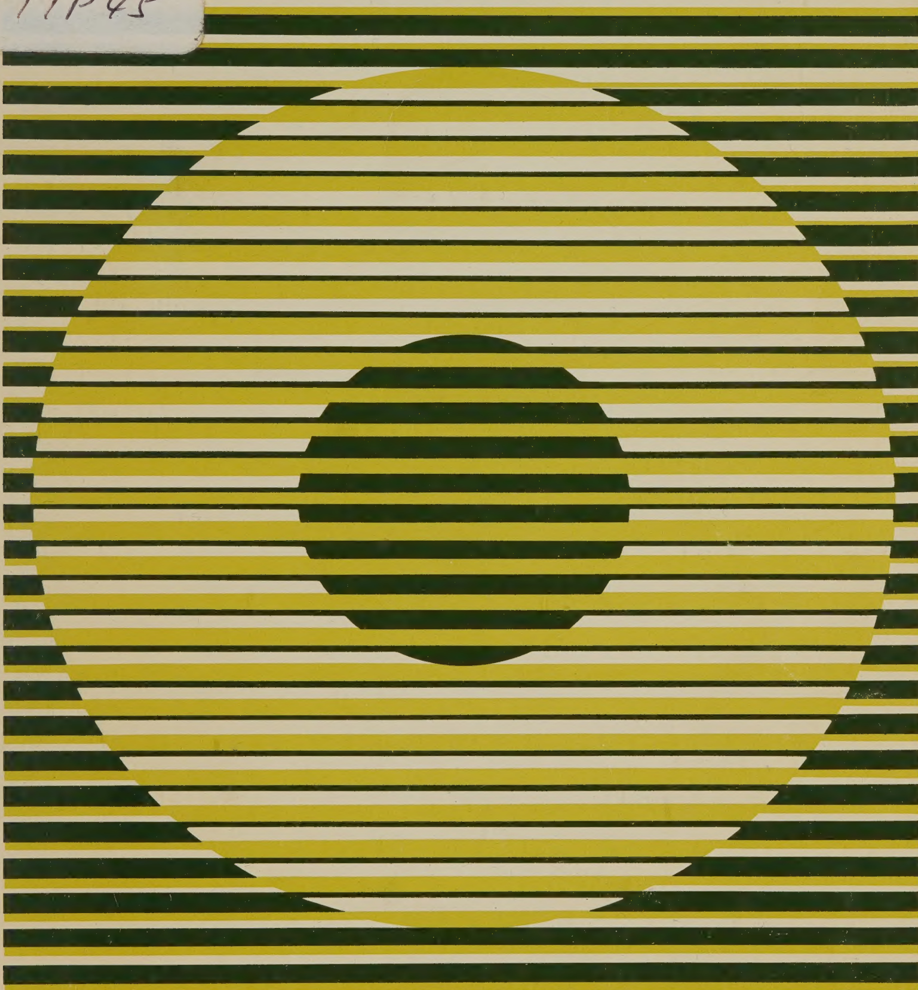
The Elimination of Mandatory Retirement:
An Economic Perspective

J. E. Pesando

Discussion Paper Series



THE ELIMINATION OF MANDATORY RETIREMENT

AN ECONOMIC PERSPECTIVE

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INTRODUCTION: THE CURRENT DEBATE

In December 1977 a special Senate Committee on Retirement Age Policies was set up by the Canadian government under the chairmanship of Senator David Croll to examine the social and economic implications of mandatory retirement based exclusively on age. The committee was formed primarily in response to recent legislation enacted in the United States that eliminated the mandatory retirement age of 70 previously applied to federal employees and raised to 70 the age protection of the law forbidding discrimination generally, including mandatory retirement. The U.S. legislation passed rapidly with a minimum of debate, human rights considerations being the prime motive. But in the opinion of many observers the economic aspects of the legislation received too little attention, and even now the potential repercussions are not fully understood.

This paper was inspired by the briefs submitted to the Canadian Senate Committee, together with the testimony presented in the formal hearings. Confusion still seems to exist, first, between the arguments based on human rights and those based on economics and, secondly, on the economic issues themselves.

Human rights considerations tend to support the elimination of mandatory retirement: economic arguments do not. Instead, economic analysis draws attention to the efficiency of mandatory retirement as a dismissal procedure and emphasizes both that compulsory retirement was introduced in response to market forces and that it is part of the total package of rules (pay scales, seniority provisions, and so forth) which have evolved to govern the workplace.

Many of the arguments put forward by both sides in the debate are either incomplete or misleading and need clarification. Many witnesses who testified before the Senate Committee, for example, simply assumed that the elimination of mandatory retirement would not be accompanied by an actuarially appropriate increase in pensions for those who work beyond normal retirement age. Indeed, many suggested that the postponement of Canada Pension Plan/Old Age Security (CCP/OAS)

benefits without actuarial adjustment would be desirable, apparently not seeing that an additional tax on the earnings of those workers who continued to work beyond normal retirement age would provide a strong deterrent to such activity.

This paper sets out and evaluates the economic arguments in the debate, notably in those areas that in the Senate Committee hearings appeared the most likely sources of confusion or misunderstanding. The discussion is organized around six major questions:

- Are mandatory retirement provisions inefficient from a purely economic viewpoint?
- Would a ban on mandatory retirement significantly increase the number of employees who continued to work past the age of 65?
- If mandatory retirement provisions are outlawed, how should the benefits in employer-sponsored plans be adjusted to encourage work by older employees?
- Would banning compulsory retirement reduce the tax burden on future workers, given the projected increase in the ratio of pensioners to active workers?
- Is postponed retirement necessary to enable the aged to enjoy a satisfactory standard of living in view of the limitations of private pension plans, including the absence of indexed benefits?
- Would a ban on mandatory retirement reduce job opportunities?

THE ECONOMIC EFFICIENCY OF MANDATORY RETIREMENT

Regulations under the federal Public Service Superannuation Act, together with provincial statutory or regulatory requirements, now impose a mandatory retirement age of 65 on public sector employees, although the option of extending employment is provided. The Canadian Human Rights Act, effective since March 1978, prohibits mandatory retirement based on age in the federally regulated sector, which, however, includes less than 10 per cent of employees in the private sector, most of whom are in employer-sponsored pension plans

with mandatory retirement provisions. Data on the 'normal retirement age' under such plans, which often corresponds to the age of compulsory retirement, suggest that most employees do not have the option of working beyond the age of 65.

The argument is often made by human rights proponents that the prohibition of work by potentially productive employees after an arbitrary age shows the economic inefficiency of compulsory retirement. But in reality mandatory retirement acts as a dismissal procedure in the workplace and as such it is an integral part of the total package of work rules (pay scales, seniority provisions, and so forth) which have evolved in response to market forces. Having arisen from the interplay of market forces, compulsory retirement is difficult to challenge on efficiency grounds. Further, under present arrangements employers often have the option of retaining the services of productive employees who are beyond the retirement age, whether on a contractual or a part-time basis. In view of this option compulsory retirement is an economically efficient solution which allows employers to retain only the most productive workers. While mandatory retirement does force a worker to leave a particular job, it does not force him to retire from the active labour force.

Because mandatory retirement is part of a package of work rules resulting from the interplay of market forces, banning it would mean that other rules of the workplace would likely change as well. Alternative dismissal rules, involving both the monitoring and documenting of worker productivity, would be required. Rules governing pay scales and seniority might also have to be revised in order to be more closely integrated with measures of productivity. Since the current package of rules has evolved from market forces and without legislated constraints, economic theory prescribes that such changes must entail a net loss in efficiency.[1]

1 Popular arguments in favour of mandatory retirement include its 'face-saving' or humanitarian way of dismissing the unproductive employee as discussed above and the positive incentive it offers to younger workers, given the predictable retirement of those in senior

In short, considerations of economic efficiency do not support an end to compulsory retirement. In fact banning retirement would lead to both the creation of costly new productivity measurements and a new arrangement of work rules, as well as the elimination of an effective dismissal procedure. Since current retirement provisions reflect employer attitudes towards efficient dismissal procedures, future changes in these provisions - if brought about as a result of market forces rather than through legislation - would provide the best sign whether economic forces are indeed working in the direction of delayed retirement.

THE DEMAND FOR POSTPONED RETIREMENT: AN IMPORTANT UNKNOWN

If the decision to ban mandatory retirement were made, presumably on grounds of human rights, employers would be forced to develop new (and costlier) dismissal procedures, which might in turn require adjustments in such rules of the workplace as seniority provisions. If procedures that are efficient in collective terms protect the rights of individual workers, the question of the extent of the demand for postponed retirement inevitably rises. If it is limited, the potential costs of overriding established workplace procedures might outweigh the benefits of providing a small number of individuals with the option of delaying retirement from their current jobs. On the other hand if the demand is large, the costs might be justified.

Unfortunately, hard evidence on worker demand for delayed retirement is difficult to obtain. Union positions in contract negotiations suggest that there is little demand by blue collar workers. In white collar and professional occupations, the absence of a move toward the postponement or elimination of mandatory retirement from within the private sector suggests

positions. Seniority rules are widely recognized as playing a major role in the promotion of on-the-job training and indicate, as does the 'dismissal' argument, the efficiency of the work rules that have evolved in the marketplace.

there is reason to doubt that large numbers of qualified employees are being denied the opportunity to continue work.

Instead, the present trend in both Canada and the United States is towards earlier retirement. Although data on the labour force participation rates of the elderly do not provide hard facts on actual retirement decisions, they do lead to certain conclusions. Table 1 shows the figures for older males and females in Canada, as compiled by Burbidge and Robb (1978) for the period 1961-77. The data indicate a steady decline in the participation rates for males in each of the three age categories (55-64, 65-9, and 70 and over). For females on the other hand there has been a rise in the participation rate for those aged 55-64 but a decline in the other two age groups.

The crucial, and as yet unanswered, question is the extent to which mandatory retirement provisions have contributed to the decline in the participation rates of the elderly. The fact that the participation rate for males aged 55-64, who are less likely to be affected by mandatory retirement, has declined continuously suggests that there are other reasons for earlier retirement. To draw firm conclusions, however, one would have to know what participation rates would have been in the absence of compulsory retirement provisions. Econometric studies of individual retirement decisions could help here.

A formal analysis - both theoretical and empirical - of individual retirement decisions could in principle help identify both future retirement trends and the importance of mandatory retirement provisions. The decision by older workers to participate in the labour force can be analysed in the work-leisure theoretical framework, while cross-section data on individual retirement decisions could provide quantitative estimates of the importance of the economic and other variables which influence these decisions.

In the absence of satisfactory Canadian data, however, U.S. studies must be used. Those reviewed in a recent survey by Clark, Kreps, and Spengler (1978) suggest that social security and other pension entitlements, the earnings test used to determine social security benefits, and health status are the

Table 1: Labour force participation rates, older males and females, 1961-77

Year	Participation Rate (%)					
	Males			Females		
	55-64	65-69	70+	55-64	65-69	70+
1961	85.9	50.4	22.0	24.6	10.8	3.8
1962	85.3	49.2	20.4	25.2	11.2	3.4
1963	85.1	45.0	19.3	26.1	12.1	3.4
1964	85.3	47.1	18.4	27.2	12.6	3.8
1965	85.6	46.0	18.1	28.6	12.4	3.4
1966	85.3	46.7	17.5	30.2	11.8	3.5
1967	85.0	45.7	15.1	30.3	12.2	3.4
1968	84.7	44.1	15.2	30.8	12.4	3.4
1969	84.6	41.3	15.5	32.1	11.7	2.9
1970	83.6	37.5	16.3	31.6	10.3	2.9
1971	82.5	32.8	14.6	32.8	10.6	2.9
1972	81.6	31.1	13.1	31.5	9.1	2.5
1973	80.6	30.6	12.3	32.9	9.3	2.4
1974	79.5	30.0	11.9	31.5	8.8	2.4
1975	79.3	29.9	10.9	30.7	9.5	2.3
1976	76.8	25.4	9.7	32.0	7.9	2.1
1977	76.6	25.1	9.2	32.2	8.4	2.0

NOTE: Annual data are averages of monthly rates, drawn from the Labour Force Survey with rates prior to 1976 converted to the 'new' definition, as compiled by Burbidge and Robb (1978).

key factors determining the retirement decisions of older workers. Unfortunately the role played by mandatory retirement provisions has not been precisely determined. The Survey of Newly Entitled Beneficiaries, conducted by the Social Security Administration between June 1968 and June 1970, provides some evidence on this issue. As reported by Reno (1976), 1 per cent of the men aged 62 and 7 per cent of those aged 63-4 cited compulsory termination as the reason for leaving their last job, while 36 per cent of those aged 65 cited this reason. The Survey of Retirement of individuals over age 55 and not yet retired, conducted by Statistics Canada as a Labour Force Survey Supplement in February 1975, provides similar evidence. Table 2 presents the replies, which indicate that few males under 65 listed mandatory termination as the reason for retirement, while 17 per cent of those aged 65 and 24 per cent of those aged 67 did so.

Table 2: Retired males, by age and reason, February 1975

Age	Percentage retired	Compulsory retirement	Poor health	Being laid off	Other reasons
55	9.1	0.3	5.8	1.3	1.7
57	8.5	0.2	5.5	1.2	1.6
59	12.6	0.2	8.5	1.3	3.8
61	16.5	0.3	11.0	1.4	3.8
63	24.7	0.4	14.5	2.2	7.6
65	57.7	17.4	22.1	4.0	14.2
67	78.1	23.8	29.7	5.4	19.2
69	86.1	25.2	32.9	5.9	22.1
71	93.0	28.3	33.7	6.1	24.9

NOTE: Other reasons are mainly discretionary.
SOURCE: Survey of Retirement conducted by Statistics Canada in February 1975.

Two points should be noted before drawing conclusions from these data. First, survey techniques may be an unreliable source of information on the reasons behind retirement decisions because respondents are tempted to offer the more socially acceptable reasons for retirement. (Surveys of the elderly in the United States, for example, tend to indicate a more important role for health status, a socially accepted rationale for retirement, than do statistical studies of the labour force behaviour of the elderly.) Secondly, the fact that respondents gave mandatory termination as the reason for their retirement does not mean that these individuals would have chosen to continue to work at their previous job if they had the option to do so. Supplementary questions in the Canadian survey, for example, indicate that one-half of those who cited mandatory termination as the reason for their retirement were content with the timing of their retirement, and some would have retired earlier if their financial circumstances had permitted it. There are, then, severe drawbacks in attempting to extract evidence from the survey data to support the argument that mandatory retirement provisions act as a serious deterrent to elderly workers' participation in the labour force

In fact, the evidence suggests instead that pension and other economic factors, not mandatory retirement, act as the primary considerations behind the decision to retire.

What conclusions regarding Canadians' retirement decisions can be inferred from the U.S. studies? First, by demonstrating the importance of pension entitlements the studies suggest that the maturing of the CPP, together with the increased flow of benefits over time from employer-sponsored plans, may serve to reduce participation rates of the elderly. Secondly, by demonstrating the importance of the 'tax-back' feature of social security[2] the U.S. studies indicate that older workers' decisions to delay retirement will depend heavily on the nature of the actuarial adjustments to benefits earned by the potential retirees, whether from private plans or the CPP and OAS. Significantly, the tax-back feature - which does not at present have a counterpart in the CPP and OAS - suggests that caution be exercised in any attempt to extract the implications for Canada from the U.S. experience with its new mandatory retirement laws.

Current econometric studies in general do not demonstrate that a demand for work is now being thwarted by compulsory retirement provisions. Indeed, no one has as yet proven the existence (or the absence) of a significant demand for work by those affected by mandatory retirement provisions. The continuing trend towards early retirement, together with the continuing increase in the pension entitlement of labour force participants, does suggest that caution should be exercised in entertaining claims that mandatory retirement is the most significant factor thwarting the work objectives of large numbers of elderly Canadians.

ACTUARIAL ADJUSTMENTS IN EMPLOYER-SPONSORED PENSION PLANS WHEN RETIREMENT IS DELAYED

Many witnesses in the Senate Committee hearings referred to the cost savings to plan sponsors if employees were to opt for

2 The 'tax-back' feature of social security reduces benefits by one dollar for every two dollars in earnings above the relatively modest amount (in 1977) of $3000 a year.

delayed retirement. In doing so they assumed that pension benefits would not be actuarially increased to offset the reduced number of years that such employees would be expected to live during retirement. But if no such actuarial increases in other forms of the compensation package were made, a strong deterrent to increased work after normal retirement age would be created, and the motivation for eliminating mandatory retirement would tend to be thwarted.

If compulsory retirement were banned, the question of when and how pension benefits in employer-sponsored plans became payable would inevitably arise. There are three main options. First, both service credits and contributions could cease at the normal retirement age under the plan, with the employee receiving an unadjusted pension commencing at his actual retirement date. Secondly, both service credits and contributions would cease at normal retirement age, but the employee would receive an actuarially adjusted pension commencing at his actual retirement date. Thirdly, both service credits and contributions could continue until the actual date of retirement, with the employee receiving a benefit defined by the terms of the plan to commence at his retirement date. In the debate over mandatory retirement the third option has received the least attention. Because of this and because, at least for defined benefit plans, it is the most complicated to analyse in terms of its incentive effects, it will not be considered further.

Many observers simply assume, perhaps correctly, that employers would choose the first option if it were available to them. Under defined benefit plans benefits are based on the remuneration the employee receives each year or for a selected number of years of service. Two variables, final earnings and career average, currently encompass 75 per cent of all plan members in the private sector.

Suppose, for example, that an employee at age 65 were entitled on the basis of his defined benefit formula to a pension of $10 000 a year. (The employee may be assumed, for instance, to have accrued benefits equal to 2 per cent of his final salary of $20 000 for each of his twenty-five years of

service.) At a market interest rate of 8 per cent, and assuming the employee will have a life expectancy of fifteen years after retiring, the cost to the plan sponsor - and thus the worth to the employee - of the requisite annuity would be $85 594.

If the employee delayed retirement to age 70 and received an unadjusted pension for his then-assumed life expectancy of ten years, the cost to the plan sponsor of the requisite annuity would fall to $67 100. The present value of this amount in the year in which the employee reached 65, the appropriate comparison to the cost to the plan sponsor if the employee quits at normal retirement age, is only $45 669. Since the reduced cost to the plan sponsor means a corresponding reduction in the value of the pension to the employee, the loss of $39 925 in the net worth of his pension if he continues to work is clearly a strong incentive for him to retire at age 65.

Under the second option the employee would receive at age 70 a pension with a present value of $125 763 (i.e. $85 594 with interest accumulated for five years at 8 per cent). For the assumed life expectancy of ten years at age 70, this amount would purchase at an 8 per cent interest rate an annual pension of $18 743. Note that under the second option the cost of the pension to the plan sponsor would be the same as when the employee retires at age 65, or $85 594 at the time the employee reaches this age.

The above example illustrates dramatically the potential deterrent to work after normal retirement age if members of defined benefit plans do not receive an appropriate actuarial revision of their pension entitlements. In spite of this fact it seems almost universally assumed that no such adjustments are necessary.

For members of defined contribution plans, in which the pension is determined by the accumulated value of the contributions made by or on behalf of the employee, this problem problem is less likely to arise. If at the normal retirement age of 65 the employee were to have accumulated contributions on his behalf equal to $85 594 (i.e. sufficient to purchase at 8 per cent the annuity of $10 000 for fifteen years), it is not clear how these funds could be denied him. At present, however,

only 5 per cent of the members of employer-sponsored plans in Canada are in money-purchase plans.

To sum up, if the purpose of eliminating mandatory retirement is to encourage individuals over age 65 to remain in the labour force, then appropriate actuarial adjustment will have to be made to the pension entitlements of workers who opt for later retirement.[3] If no adjustments are made to existing pension procedures, employees would have little incentive to continue working.

It might be argued that employers, on the other hand, would have a strong incentive to <u>encourage</u> older employees to continue working, since, if no adjustments were made to workers' pensions, employers' costs would be reduced. If such were the case, however, it would presumably be possible to accomplish the same purpose by more efficient alternative means. As noted previously, ending compulsory retirement would require alternative dismissal procedures, ones that would involve both the monitoring and documenting of worker productivity. It would be more efficient to implement these new dismissal procedures, which would allow employers to retain only productive employees, than to have employers encourage all employees to continue working, even those whose productivity had declined.

In addition to pensions, mention is often made of the higher costs to the employer of medical and disability insurance if employees were to opt in large numbers for postponed retirement. Under the second option noted above, the employer would no longer make contributions to the company pension plan, a fact which - depending on the specifics of the plan - may well dominate the increase in insurance costs. Further, the employer may retain the option of at least moderating the increase in the current wage of the older worker

3 One possibility would be to require that the lump sum necessary to purchase the defined benefit be transferred to a RRSP. This option could be extended to members of defined contribution plans as well. The appropriate interest rate in this case would be a real interest rate of say 2½ to 3 per cent. See Pesando (1979) and below.

as a means of recapturing all or part of these costs. In short, the potentially higher medical and disability premiums do not seem to mean that pension entitlements should not be actuarially adjusted if retirement is delayed.

Finally, the question can be raised whether the deterrent implicit in the failure to adjust pension entitlements actuarially would in fact discourage work beyond normal retirement age. Alternatively, would those so affected be willing to work in spite of the implicit - and in some cases quite high - tax imposed on wage income earned after the individual's normal retirement date, reflecting (perhaps) the individual's intense desire to remain an active participant in the labour force?

In technical terms, would the failure to adjust the benefits formula simply enable the employer gradually to recapture the rents - that portion of the employees earnings above the minimum necessary to entice the worker to remain at the job - that would otherwise accrue to the employee? Two points are worth noting. First, studies in the United States have confirmed the quantitative importance of the deterrent effect on labour supply of the earnings test on social security benefits, a test which effectively taxes earnings in a manner similar to the failure to adjust pension entitlements actuarially. Other things equal, a reduction in the amount of work by those beyond normal retirement age could confidently be predicted. Second, by virtue of seniority and other rules of the workplace, the existence of specific skills, and so on, the earnings of most workers contain some economic rents. The decision to encourage employers to try to recapture these rents, implicit in a decision not to require that appropriate actuarial adjustments be made, would be both arbitrary and capricious.

THE PENSIONER RATIO AND THE TAX BURDEN ON FUTURE WORKERS

It is often said that the tax burden on future generations would be reduced if mandatory retirement provisions are outlawed and large numbers of Canadians avail themselves of the

opportunity to postpone retirement. Since employer-sponsored pension plans must be funded by law, the pensions so created and the resulting claims to real output are simply financed by the dissaving of plan members. The argument that the tax burden will be reduced if mandatory retirement is prohibited is thus really directed to public programs such as CPP and OAS.

Of course the ratio of pensioners to active workers is projected to increase sharply in Canada after the turn of the century, as shown in Table 3. Under low-immigration and low-fertility assumptions, for example, the pensioner ratio (the ratio of those over 65 to those aged 14 to 64) could rise from its present value of 0.13 to 0.29 by the year 2025. The higher the pensioner ratio the higher the tax rate needed to provide a given level of benefits under pay-go pension plans. (Pay-go plans are ones in which current benefits are financed by current tax revenues.) Further, Canada's public pension programs are in fact effectively funded on a pay-go basis, at least at present. The CPP is funded to a large extent that way, and OAS completely so. At current contribution rates the investment fund of the CPP will peak around 1990 and be exhausted by the end of the century. At that time, if not before, contribution rates will have to be raised to meet benefits payable under the plan. If, for example, the CPP were financed on a pay-go basis <u>after</u> the present fund was exhausted, the contribution (tax) rates necessary to finance the benefit payments would clearly rise with the pensioner ratio, assuming the ratio of CPP benefits to average income remains constant.

How would the elimination of mandatory retirement reduce the tax burden on future generations of workers arising from the projected increase in the pensioner ratio and the essentially pay-go nature of OAS and the CPP? If (1) the age of entitlement of OAS were raised, at least for those who continued to work past 65, (2) benefits payable under the CPP were postponed without actuarial adjustment to the actual date of retirement, as in the first option analysed for employer-sponsored plans, or (3) a means test were introduced for OAS and/or CPP benefits, then such a reduction in the tax burden

Table 3: Population and ratio age 65 and over to age 14 to 64

Period total fertility rate		1.80		2.13		2.50	
Gross annual immigration	Year	Population (million)	65+/ (14-64)	Population (million)	65+/ (14-64)	Population (million)	65+/ (14-64)
100 000	1975	22.359	0.1281	22.550	0.1281	22.765	0.1281
	2000	27.200	0.1727	29.226	0.1647	31.573	0.1566
	2025	28.590	0.2864	33.782	0.2440	40.412	0.2068
	2050	26.716	0.3090	35.984	0.2536	49.150	0.2076
200 000	1975	22.773	0.1263	22.967	0.1263	23.185	0.1263
	2000	30.745	0.1587	32.925	0.1519	35.447	0.1450
	2025	35.634	0.2597	41.448	0.2258	48.832	0.1949
	2050	36.888	0.2799	47.693	0.2367	62.867	0.1984

SOURCE: Pesando and Rea (1977, 83, Table 9). Emigration is assumed equal to 60 000 a year. For further notes and interpretation, see ibid.

might occur. Each of these options, however, is clearly independent of the question whether or not to ban compulsory retirement. Further, each would serve - in effect - as a tax on the earnings of those who chose to work beyond the normal retirement age of 65, and as such would serve as a strong disincentive to such individuals to remain in the labour force. If the purpose of a ban on mandatory retirement is to encourage work by those beyond normal retirement age, each of the three options would be clearly counterproductive.

Although many countries, such as the United States, do income-test the benefits of their public retirement programs, the disincentives so created unambiguously discourage work by those over the basic age of entitlement. In Canada the thrust of public policy in this area has been in the opposite direction. Over the period 1966 to 1970, eligibility for OAS (and GIS) was gradually reduced from age 70 to 65. The retirement and earnings test for those aged 65 to 69 were removed from the CPP in 1975 and from the QPP in 1977.

Clearly, the decision to ban mandatory retirement in and of itself would provide no problems for the delivery of retirement incomes through CPP and OAS. The benefits from both programs could simply commence at age 65 as they do today. Alternatively, a costless procedure for the federal government would be to grant actuarially increased CPP (or CPP together with OAS) benefits to those who opt for delayed retirement. Not only would this option provide a clear signal of the government's intention to encourage work by those aged 65 or over but it would also set a useful precedent in identifying the nature of the actuarial adjustments appropriate for members of private plans who opt for delayed retirement.

The question of how the tax burden on future generations implicit in the present structure of OAS and the CPP might be relieved clearly lies beyond the scope of the present discussion paper. Pesando and Rea (1977), for example, discuss the merits of moving towards fuller funding of the CPP, a step that would help insulate future generations from the tax consequences of changing demographic patterns. At present the disincentive effects of any of the changes to the public programs which would serve to reduce the tax burden associated with a rising pensioner ratio must be both emphasized and discouraged. These disincentives do not appear to be fully appreciated. Witnesses have argued, for example, that a ban on compulsory retirement would both greatly increase the amount of work done by those beyond age 65 and greatly relieve the tax burden on future generations arising from Canada's public pension programs. Clearly it could not do both.

THE ABSENCE OF INDEXING IN PRIVATE PENSION PLANS

Opponents of mandatory retirement often suggest that the well-known limitations of employer-sponsored pension plans mean that employees should be given the opportunity to generate additional earnings through delayed retirement. On the whole, it is agreed by everyone that the lack of portability, the

absence of immediate vesting, and the infrequent use of survivor-benefit options in the private pension system merit redress. However, none of these problems need be tied to the discussion of mandatory retirement.

Under private pension plans retirement is most likely to be postponed because pension benefits are not indexed. More important still, analysts disagree about the desirability of moving towards contractual indexing and about whether the Canadian economy can even 'afford' the cost of indexed pensions. The Canadian Pension Conference, for example, strongly opposes indexing: 'In summary, the Canadian Pension Conference is extremely concerned about the effects of indexing pensions and suggests that any extension of full and automatic pension indexing into the private sector should be discouraged' (Brief, paragraph 23).

In view of the uncertainty about the real value of their pensions during inflationary periods, workers might choose to extend their work lives (and thus reduce their expected period of retirement) if able to do so. Obviously it would be better to guarantee the worker that the real value of his pension will be preserved and enable him to decide on retirement without concern about the future rate of inflation. Many observers, however, are confused about the costs and the macroeconomic consequences of contractual indexing.

At an inflation rate of only 6 per cent, which is modest by recent standards, the real value of a fixed-dollar pension will have fallen to only 42 per cent of its initial value after fifteen years. Further, projections for both Canada and the United States suggest that the rate of inflation is likely to remain high by historical standards for a considerable time to come. In view of the growing recognition that pension benefits are deferred wages rather than a gift bestowed by a benevolent employer, it can scarely be argued that the real income of pensioners should be allowed to be reduced arbitrarily by inflation. Although sponsors of many private plans have augmented the pensions in force during the past few years, these increases have inevitably fallen short of offsetting the rise in the cost of living. Further, the recipients have no

guarantee that even such partial additional payments will be continued, a result of great concern to the elderly.

Unfortunately, present investment opportunities make very uncertain the eventual cost of contractual indexing. If the real return to a plan's assets were unaffected by inflation, the plan could in principle provide inflation-indexed pensions during the employees' retirement years and remain actuarially sound. Stated differently, the costs to the plan sponsor of providing fully indexed benefits in an inflationary climate would be no higher than in a world of no inflation, nor would these costs be any less certain. But the real return to a portfolio consisting of equities and/or fixed-income securities declines in response to an increase in the rate of inflation. In the absence of an index bond or its equivalent (a bond whose interest payments are linked to the rate of inflation, thus, if held to maturity, providing a fixed real return) plan sponsors cannot commit themselves to contractual indexing without assuming a liability for indefinite future costs.

Although indexing private pension plans confronts sponsors with great difficulties, the same is not true for the Canadian economy as a whole. The argument that the Canadian economy cannot 'afford' indexed pensions, advanced repeatedly without scrutiny, is fallacious. If the pensions of retirees are fully indexed to inflation, their claim on real output of the economy is simply maintained, not increased. Only if real GNP declined would the relative share of output to pensioners increase, but even then their absolute claim on real output would remain unchanged. To make the economy as a whole unable to 'afford' indexation an acceleration in the rate of inflation would have to depress not only the rate of growth of real GNP but also its level.

Even a casual review of accepted macroeconomic doctrine discredits this possibility. Until very recently an increase in the rate of inflation in Canada has been associated with an increase in the rate of growth of real GNP, and conversely. The recent attention accorded the role of supply 'shocks,' such as crop failure, the successful formation of the international oil cartel, and the deterioration in the terms of trade occasioned

by the decline in the foreign exchange value of the Canadian dollar, must be viewed from this perspective. Such 'supply shocks' can cause a short-run increase in the price level to be associated with a reduction in the real rate of growth of GNP. Clearly, such forces have exerted an adverse impact on the performance of the Canadian economy during the past few years. The likelihood of a succession of such shocks sufficient to produce a long-term negative association between the rate of inflation and rate of growth of real GNP would, however, appear to be remote, at least based on historical evidence.

To sum up: there is no reason to believe that a long-term increase in the rate of inflation will lead to a reduction in the real rate of growth of GNP, let alone in its level. The problem posed by inflation instead concerns its arbitrary impact on the distribution of income or upon the claims to real GNP. If real GNP is unaffected by inflation, then for each net loser from inflation there is a net gainer, and conversely. If pensions are not indexed, inflation redistributes income away from pensioners to other economic agents. As the claim to real goods and services by pensioners is reduced by inflation, the claim by other members of society is necessarily increased. A legitimate concern of plan sponsors in the private sector is that recent inflation has redistributed income away from them. Issuers of fixed-income securities and possibly the government, but not pensioners, have benefited from this income transfer. In short, plan sponsors cannot easily index benefits under the present institutional setting.

This fact does not, however, imply that indexed pensions would place an onerous burden on the Canadian economy as a whole. In fact the case for indexing pensions is a sound one, in spite of the serious obstacles to be overcome, and many analysts have advocated an expanded CPP/OAS package and a corresponding reduction in the importance of private pension plans. Opponents of further expansion of public retirement programs must address their efforts to improving the indexing provisions in private sector plans.

How might the ability of private plans to provide indexed benefits be enhanced, and what would be the additional costs to

employers sponsoring such plans? An open-ended commitment on future costs could be avoided if sponsors could invest their funds in index bonds.Such bonds would pay a real return of perhaps 3 per cent a year and would fully compensate their holders for the erosion of their capital due to inflation. Although private firms in Canada and elsewhere have been reluctant to issue index bonds, the federal government would encounter little difficulty in doing so.

I have argued elsewhere (Pesando, 1978, 1979) in support of plan sponsors purchasing annuities at real interest rates rather than the inflation-distorted rates prevailing in the marketplace, so that inflation-induced interest earnings can be employed to escalate the pension benefit, and secondly for a government insurance scheme using the federal government's ability to underwrite inflation risk and thus enable these escalated pensions to be transformed into indexed ones. The crucial point, made clear in the index bond case, is that indexed pensions must ultimately be costed on the basis of real interest rates.

What would be the additional cost to plan sponsors? Purchasing a fifteen-year annuity (the approximate life expectancy of those retiring at age 65) at an interst rate of 3 per cent rather than the 9 per cent or so available today would increase the cost to the plan sponsor by 50 per cent. This figure greatly overstates the true increase in costs that would be incurred by plan sponsors, however, since most of them currently provide occasional increases to pensions in force, which would no longer be required under the alternative approach. In a recent survey, for example (by Tomenson-Alexander Associates, 1978), nearly 80 per cent of the firms in the sample reported ad hoc increases to pensions in force during the past five years. These adjustments approximated two-thirds of the change in the consumer price index. For such firms the increase in costs associated with purchasing annuities on the basis of real interest rates would fall to the 15-20 per cent range.[4]

4 Indeed, if private pension plans were costed on the basis of appropriate (i.e. real) interest rate assumptions in the first place,

Given the actuarial assumptions (which are open to some debate), the study indicates that if the combined pension program open to federal civil servants were fully funded it would face an initial unfunded liability of $5.9 billion. In fact the basic benefit package - not the indexing provisions - is the prime source of this unfunded liability (Pesando, 1979). The study by Tomenson-Alexander does identify the very large contributions that the federal government as an emplcyer must make to meet the expenses of the combined program. These estimates in turn represent a crucial input into the controversy surrounding the total compensation of public sector as against private sector employees. The fact that the basic benefit package rather than the indexing provisions is the prime source of the unfunded liability is crucial, because it means that a reduction in basic benefits (such as tightening of the early retirement provisions) is likely to be more appropriate than the elimination of indexing if subsequent studies confirm a higher level of total compensation for public sector employees.

Finally, why did Robert Andras recently propose that the contractual indexing provisions of the pension plan for civil servants be replaced by a system of ad hoc cost-of-living increases? The answer, quite simply, is political expediency: good politics but bad economics. (Andras did, however, emphasize his continued commitment to the principle of full indexation.) Most important of all, the emotional - but ultimately unsustainable - arguments against indexing can be persuasive, to the detriment of those seeking assurances of a fixed standard of living during their retirement years.

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the above discussion of increased costs would be entirely irrelevant! An unfortunate legacy of the early 1970s was the use of higher-interest-rate assumptions (or higher-interest-rate-relative-to-wage-increase assumptions) by actuaries and their clients in the costing of defined benefit plans. The erroneous association of the higher nominal interest rates available in the marketplace with higher real returns led, in effect, to the understatement of true pensions costs. The large increase in deficiencies encountered by many plans in recent years, which have been used by plan sponsors to bolster their claim that the indexing of pension benefits is too expensive, can be traced in part to the use of inappropriate cost assumptions which made such 'cost overruns' inevitable.

To sum up: the absence of contractually indexed pension benefits may increase the demand for postponed retirement in an inflationary climate. The appropriate response to this concern, however, must be to improve the ability of employer-sponsored plans in the private sector to provide indexed pensions, rather than simply to accept this point as an argument against mandatory retirement. The Canadian economy can 'afford' indexed pensions, so that this goal is a viable one, towards which efforts should be directed.

JOB OPPORTUNITIES FOR THE YOUNG AND OTHER POTENTIAL ENTRANTS TO THE LABOUR FORCE

It has been suggested that ending compulsory retirement might reduce the job opportunities available to other potential labour force entrants, particularly the young. The evidence adduced typically consists of statements by personnel managers to the effect that the decision by x per cent of its older workers to delay their retirement will reduce by y per cent the amount of hiring they otherwise would do. This proposition also reflects in large part the current situation in the labour market, in which measured unemployment - particularly among the young - is very high by historical standards.

Is this concern justified? First-year economics students have always been warned of the 'lump-of-labour fallacy,' the mistaken notion that there exists a fixed number of jobs that must be allocated among competing workers. Economic analysis on the contrary points unambiguously to the capacity of an economy to absorb new entrants into the labour force, although the process may take some time in the case of particularly abrupt increases in the number of potential entrants. The error in believing that what is true for a specific employer holds for the economy as a whole is that it ignores the demand-augmenting aspects of increased entry into the labour force. As additional individuals find employment, a process which may require real wage and price level adjustments, their demand for goods and services - and the resulting demand by firms for additional labour and capital goods - will increase the rate of growth of

the economy. The personnel manager mentioned above will find that the demand for his firm's product or service is now increasing at a faster rate than anticipated, thus requiring a net increase in employment beyond that initially envisioned. Exactly how new entrants would be absorbed into the labour market and what labour market and macroeconomic adjustments would be needed are another matter. However, academic and government economists now tend to believe that the economy, if left to itself, will move automatically to full employment. This view, and the corresponding opinion that the ability of the government to 'fine tune' the economy through traditional fiscal and monetary policies is quite limited, do not reveal precisely how rapidly the new entrants will be absorbed into the active labour force. But the important point is that the postponement of retirement by elderly workers does not imply a corresponding reduction in the job opportunities available to other.

It is not known how many people wish to postpone retirement. If few decided to do so, and particularly if measures were introduced discouraging delayed retirement, concern about the reduced job opportunities for others would be purely theoretical.

SUMMARY AND OVERVIEW

The concern for human rights is clearly the prime motive in the present debate over mandatory retirement, and it may ultimately prove to be the dominant factor in determing the legislative outcome. For example, this was so in the recent enactment of retirement legislation in the United States.

Economic analysis, however, points to the efficiency of compulsory retirement as a dismissal procedure and sees its introduction to have been the result of the interplay of market forces. Eliminating it would require the development of alternative dismissal procedures and quite possibly revisions in seniority provisions and other rules of the workplace. Removing such collectively efficient procedures must be weighed

against the increased flexibility afforded to individual workers Moreover, the extent of the demand by older workers for postponed retirement is largely unknown, and the continuing trend towards early retirement must not be forgotten.

Two arguments commonly used to support the case for the elimination of mandatory retirement do not withstand closer scrutiny. The argument that allowing postponed retirement will reduce the tax burden on future generations of workers holds only if an earnings test or its equivalent were imposed on OAS and CPP benefits, a counterproductive measure. The argument that in an inflationary climate older workers should be offered the chance to postpone retirement merely points out the need for improved indexing provisions in employer-sponsored plans in the private sector, a difficult but economically viable objective.

If the purpose of allowing postponed retirement is to encourage work by those beyond normal retirement age, the proper actuarial increase of the pension entitlements - whether from public or private plans - of those who opt for postponement of retirement is essential. Many observers assume that pensions from defined benefit plans, and possibly CPP/OAS entitlements as well, will effectively be reduced for those who elect to work beyond age 65. That would create a strong deterrent, and the net result could well be less work by this group than at present. There is much evidence that the earnings test on social security benefits in the United States has discouraged work by the age group affected, and comparable results in Canada could be expected if what amounted to a tax on the benefits from either public or private pension plans were introduced.

The argument that ending compulsory retirement would reduce the job opportunities available in the labour force is not substantiated by economic analysis and should not be accorded the central role in the debate that it now enjoys. Part of it does at least draw attention to perhaps the most important unknown in the debate: the extent of the demand for postponed retirement.

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